REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1, 6, and 28 are amended. Claims 1-40 are pending in this application.

In the March 15 Office Action, the Examiner requested that any response be accompanied by a 3½ inch IBM format floppy disk containing a duplicate copy of the response. In accordance with this request, such a floppy disk accompanies this response.

Applicant submits that this amendment presents the claims in better form for consideration on appeal. Additionally, Applicant believes that consideration of this amendment could lead to favorable action that would remove one or more issues for appeal. Furthermore, Applicant believes that consideration of this amendment could lead to favorable action that would place the claims in condition for allowance.

35 U.S.C. § 103

Claims 1 and 8 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,835,765 to Matsumoto (hereinafter "Matsumoto") in view of U.S. Patent No. 5,881,284 to Kubo (hereinafter "Kubo"). Applicant respectfully submits that claims 1 and 8 are not obvious over Matsumoto in view of Kubo.

With respect to **claim 1**, the March 15 Office Action (at ¶2, page 2) asserted that:

> Kubo teaches setting a plurality of memory thresholds (threshold
> values are provided, c4 116-23). Also, Kubo teaches (job selector 4

selects ... on the basis of ... the resource utilization, c5 125-30) which corresponds to the increasingly critical memory thresholds wielding increasing control over the applications.

Kubo discloses a method of scheduling jobs in a clustered computer system to enhance a load balance between respective clusters (see, col. 1, lines 5-9 and 54-61). The clustered computer system includes multiple clusters, each cluster including at least one processor (see, Fig. 1, and col. 2, lines 1 and 56 – 62). A job selector is responsible for selecting jobs to be executed by the various clusters (see, col. 1, line 66 - col. 2, line 11; col. 3, lines 54-59; and col. 4, lines 4-8).

In contrast, amended claim 1 includes "the operating system wielding, at increasingly critical memory thresholds, correspondingly increasing control over said one or more application programs to reduce memory usage". The threshold values in Kubo are used to determine which particular cluster is to receive a job for execution (see, col. 4, lines 4-23). No increased control is wielded by an operating system over a job in Kubo at increased critical memory thresholds. Rather, in Kubo the job is executed regardless of what the threshold values indicate for particular clusters, it is simply a matter of which cluster will be selected to execute the job. Thus, Applicant respectfully submits that Kubo does not disclose the operating system wielding, at increasingly critical memory thresholds, correspondingly increasing control over said one or more application programs to reduce memory usage as claimed in claim 1.

Matsumoto discloses a computer operation management system including a computer resource manager that compares the actual amount of memory used with a control limit and notifies an error recovery processor and error communication means if the control limit is exceeded (see, col. 16, lines 28-35). Such notification causes the system to read an error recovery procedure from a program definition

and notify the operator of the error in accordance with the defined error recovery procedure (see, Fig. 13, and col. 17, lines 49-57). Matsumoto is not cited as disclosing, and Applicant further submits that Matsumoto does not disclose or suggest, the operating system wielding, at increasingly critical memory thresholds, correspondingly increasing control over said one or more application programs to reduce memory usage as claimed in claim 1. Thus, Applicant respectfully submits that Matsumoto in view of Kubo does not disclose or suggest the operating system wielding, at increasingly critical memory thresholds, correspondingly increasing control over said one or more application programs to reduce memory usage as claimed in claim 1.

For at least these reasons, Applicant respectfully submits that claim 1 is not obvious over Matsumoto in view of Kubo.

Claim 2 stands rejected under 35 U.S.C. §103 as being unpatentable over Matsumoto in view of Kubo and further in view of U.S. Patent No. 5,826,082 to Bishop et al. (hereinafter "Bishop").

The March 15 Office Action (at ¶3, page 3) asserted that:

> . . . Bishop teaches at a less critical memory threshold (resource manager determines in decision block 204, c4 152-62) interacting with at least one of the application programs to limit its use of memory (suspend a prior request, Id.).

Bishop discloses a computer system including a resource manager which is a control program responsible for allocation of the computer system's resources (see, col. 2, lines 35-37). A thread that needs a resource submits a request to the resource manager for the necessary resource including a requested amount of the resource (see, col. 3, lines 53-62). If the requested amount is not available, then the resource manager locates one or more prior requests which already have

reserved enough of the requested resource to satisfy the new request and suspends that prior request(s) (see, col. 4, line 52 – col. 5, line 31).

In contrast, claim 2 recites "communicating a request to at least one of the application programs for the at least one application program to limit its use of memory". Thus, the application program as recited in claim 2 is requested to limit itself. In Bishop, however, no program or thread limits itself. Rather, the resource manager of Bishop suspends other prior requests, thereby forcibly limiting other threads – the resource manager does not limit itself nor does it request other threads to limit themselves.

For at least these reasons, Applicant respectfully submits that claim 2 is not obvious over Matsumoto in view of Kubo and Bishop.

Claims 3 and 4 stand rejected under 35 U.S.C. §103 as being unpatentable over Matsumoto in view of Kubo and further in view of U.S. Patent No. 5,815,702 to Kannan et al. (hereinafter "Kannan"). Applicant respectfully disagrees.

With respect to **claim 3**, the March 15 Office Action (at ¶4, page 3) asserted that:

> . . . Kannan teaches prompting a user to designate at least one of the applications programs (prompt 400 provides instructions 411, c7 l34-48) and then requesting it to close itself (user close 319 the application, which in turn causes the operating system 111 to terminate 321 the application 105 and reclaim any of its resources, c8 l4-13).

Kannan discloses a system in which a user is able to continue using an application that has generated a fatal exception that would otherwise have caused the operating system to terminate execution of the application (see, col. 2, lines 39-43). When a fatal exception is detected, a crash guard process displays a warning dialog notifying the user of the "offending" application in which the fatal

exception was detected (see, Fig. 4, and col. 7, lines 34-42). The warning dialog further allows the user to continue working with, or alternatively terminate, the offending application (see, Fig. 4, and col. 7, lines 42-47).

In contrast, claim 3 recites "prompting a user to select at least one of the application programs and then the operating system requesting that the at least one selected application program close itself". Thus, in claim 3 the user is able to select which application program(s) will be requested to close itself. Kannan, on the other hand, discloses notifying the user of an application that caused a fatal exception to occur and allowing the user to indicate only whether that offending application should be terminated. There is no application selection by the user disclosed in Kannan – the user is limited in choices simply to whether to terminate the offending application.

For at least these reasons, Applicant respectfully submits that claim 3 is not obvious over Matsumoto in view of Kubo and Kannan.

With respect to **claim 4**, analogous to the discussion above regarding claim 3, Applicant respectfully submits that there is no disclosure or suggestion in Kannan of prompting a user to select at least one of the applications programs to be terminated as claimed in claim 4.

Claim 5 stands rejected under 35 U.S.C. §103 as being unpatentable over Matsumoto in view of Kubo and further in view of Bishop and U.S. Patent No. 5,317,752 to Jewett et al. (hereinafter "Jewett"). Applicant respectfully disagrees.

"In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2D 1443, 1446, 24 USPQ2d, 1443, 1445

(Fed. Cir. 1992). See also MPEP § 2141.01(a). With respect to **claim 5**, Applicant respectfully submits that Jewett and claim 5 are directed to different fields of endeavor (nonanalogous arts) and thus that Jewett cannot be relied on as a reference in rejecting claim 5. Claim 5 is directed to a method of controlling memory usage in a computer system having limited physical memory, whereas Jewett is directed to a shutdown and restart procedure in the event of a power failure (see, col. 1, lines 25-28; and col. 2, line 45 – col. 3, line 9). Applicant respectfully submits that controlling memory usage in a computer system having limited physical memory is not in the same field of endeavor as shutdown and restart procedures in the event of power failures, and thus that Jewett is not a valid §103 reference for rejecting claim 5.

With respect to **claim 6**, claim 6 was rejected for the same rationale as claims 2-4 (see, March 15 Office Action at ¶5, page 4). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claims 2-4, the cited references do not disclose or suggest the method of claim 6.

Claim 7 stands rejected under 35 U.S.C. §103 as being unpatentable over Matsumoto in view of Kubo and further in view of U.S. Patent No. 5,950,221 to Draves et al. (hereinafter "Draves"). Applicant respectfully submits that claim 7 is not obvious over Matsumoto in view of Kubo and Draves.

With respect to **claim 7**, claim 7 depends from claim 1 and Applicant thus submits that claim 7 is allowable over Matsumoto in view of Kubo for at least the same reasons as discussed above with reference to claim 1. Applicant respectfully submits that Draves is not cited as curing the deficiencies of Matsumoto and Kubo with respect to claim 1. For at least these reasons, Applicant respectfully submits that claim 7 is not obvious over Matsumoto in view of Kubo and Draves.

With respect to **claims 9-16**, claims 9-16 were rejected for the same rationale as claims 1-8 (see, March 15 Office Action at ¶6, page 4). Applicant respectfully submits that, analogous to the discussions above regarding claims 1-8, the cited references do not disclose or suggest the computer-readable storage mediums of each of claims 9-16. For at least these reasons, Applicant submits that claims 9-16 are allowable over the cited references.

With respect to **claim 17**, claim 17 was rejected for the same rationale as claims 5-8 (see, March 15 Office Action at ¶6, page 4). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claims 5-8, the cited references do not disclose or suggest the method of claim 17.

With respect to **claims 18-19**, claims 18 and 19 depend from claim 17 and Applicant thus submits that claims 18 and 19 are allowable over the cited references for at least the same reasons as discussed above with reference to claim 17.

With respect to **claim 20**, claim 20 was rejected for the same rationale as claims 3-5 (see, March 15 Office Action at ¶6, page 4). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claims 3-5, the cited references do not disclose or suggest the method of claim 20.

With respect to **claim 21**, claim 20 was rejected for the same rationale as claim 20 (see, March 15 Office Action at ¶6, page 4). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claims 20, the cited references do not disclose or suggest the method of claim 21.

With respect to **claim 22**, claim 22 was rejected for the same rationale as claim 17 (see, March 15 Office Action at ¶6, page 4). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding

claim 17, the cited references do not disclose or suggest the computer-readable storage medium of claim 22.

With respect to **claim 23**, claim 23 was rejected for the same rationale as claim 1 (see, March 15 Office Action at ¶6, page 5). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claim 1, the cited references do not disclose or suggest the computer system of claim 23.

With respect to **claims 24-30**, claims 24-30 were apparently rejected for the same rationale as claims 2-8 (see, March 15 Office Action at ¶6, page 5). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claims 2-8, the cited references do not disclose or suggest the computer systems of each of claims 24-30.

With respect to **claim 31**, claim 31 was rejected for the same rationale as claim 20 (see, March 15 Office Action at ¶6, page 5). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claim 20, the cited references do not disclose or suggest the computer system of claim 31.

With respect to **claims 32 and 33**, claims 32 and 33 were rejected for the same rationale as claim 2 (see, March 15 Office Action at ¶6, page 5). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claim 2, the cited references do not disclose or suggest the methods of each of claims 32 and 33.

Claims 34 and 35 stand rejected under 35 U.S.C. §103 as being unpatentable over Matsumoto in view of Kubo and Bishop and further in view of

Kannan. Applicant respectfully submits that claims 34 and 35 are not obvious over Matsumoto in view of Kubo, Bishop, and Kannan.

With respect to **claims 34 and 35**, claims 34 and 35 each depend from claim 32 and Applicant thus submits that claims 34 and 35 are allowable over Matsumoto in view of Kubo and Bishop for at least the reasons discussed above with reference to claim 32. Applicant respectfully submits that Kannan is not cited as curing, and that Kannan does not cure, the deficiencies of Matsumoto, Kubo, and Bishop with respect to claim 32. For at least these reasons, Applicant respectfully submits that claims 34 and 35 are not obvious over Matsumoto in view of Kubo and Bishop and further in view of Kannan.

With respect to **claims 36-39**, claims 36-39 were rejected for the same rationale as claims 32-35 (see, March 15 Office Action at ¶7, page 6). Applicant respectfully submits that, for at least reasons analogous to the discussions above regarding claims 32-35, the cited references do not disclose or suggest the computer-readable storage mediums of each of claims 36-39.

Claim 40 stands rejected under 35 U.S.C. §103 as being unpatentable over Kannan in view of Bishop. Applicant respectfully submits that claim 40 is not obvious over Kannan in view of Bishop.

With respect to **claim 40**, Applicant respectfully submits that, analogous to the discussions above, neither Kannan nor Bishop discloses or suggests an application program being responsive to reduce its current use of memory as claimed in claim 40. Claim 40 recites "the application program being responsive to a particular message received through its message loop to reduce its current use of memory". In contrast, Bishop discloses a resource manager which can suspend prior requests and thus forcibly limit other threads – there is no disclosure or

suggestion in Bishop of the resource manager reducing its own use of memory or of the resource manager sending a message to another thread for the other thread to reduce its own use of memory (rather, the resource manager reduces the other thread's use of memory by forcibly limiting that thread).

For at least these reasons, Applicant respectfully submits that claim 40 is not obvious over Kannan in view of Bishop.

Applicant respectfully requests that the §103 rejections be withdrawn.

Conclusion

Claims 1-40 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. Should any matter in this case remain unresolved, the undersigned attorney respectfully requests a telephone conference with the Examiner to resolve any such outstanding matter.

Respectfully Submitted,

Date: 8/3/00

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